

ITEM: 10

SUBJECT: Sacramento Municipal Utilities District Rancho Seco Nuclear Generating Station No.1 and Rancho Seco Park

BOARD ACTION: *Consideration of NPDES Permit Renewal*

BACKGROUND: The Sacramento Municipal Utility District (Discharger) owns and operates the Rancho Seco Nuclear Generating Station, Unit 1, which is a decommissioning nuclear facility nearing completion of the dismantlement phase of decommissioning. Wastewater consisting of stormwater, fire pump testing water, irrigation runoff, treated liquid radioactive wastewater, and treated municipal wastewater is combined and diluted with water from the Folsom South Canal and discharged to an unnamed tributary of Clay Creek, a water of the United States and a tributary to the Cosumnes River.

The proposed Order also regulates a 1-acre wastewater treatment pond located at Rancho Seco Park, adjacent to the Rancho Seco Nuclear Generating Station, Unit 1. The unlined, aerated pond treats an annual average flow of approximately 2,000 gallons per day of domestic wastewater from the park. There is no surface water discharge from the Rancho Seco Park wastewater treatment pond.

The proposed Order includes new effluent limitations for copper and electrical conductivity. The Discharger may be unable to immediately comply with the new effluent limitations for copper. Therefore, a compliance time schedule is established in the Order.

ISSUES: The Sacramento Municipal Utilities District (Discharger) is contesting the proposed Permit. The major issues discussed in the public comments are summarized below:

Flow Limitation: The Discharger objects to the discharge limitation of 14 mgd included in the proposed Permit and contends that it is a new requirement that is not necessary.

Flow limits in NPDES permits are appropriate to regulate the amount of wastewater discharged to surface waters. The flow limit in the proposed Order is based on the information provided by the Discharger in its report of waste discharge.

Electrical Conductivity: The Discharger objects to the new effluent limitation for Electrical Conductivity of 110 μ mhos/cm included in the proposed Permit and states that, based on the reasonable potential analysis included in Attachment F of the proposed Order, the discharge has no reasonable potential to cause or contribute to an in-stream excursion above water quality objectives for salinity.

The discharge does not have reasonable potential to cause or contribute to an in-stream excursion of water quality objectives for salinity. However, the receiving water is tributary to the Sacramento-San Joaquin Delta, therefore, of additional concern is the salt contribution to Delta waters. Allowing the Discharger to increase its current salt loading may be contrary to the Region wide effort to address salinity in the Central Valley and Resolution 68-16, which requires that existing high quality waters be maintained until it has been demonstrated that any change will be consistent with the maximum benefit to the people of the State. A performance-based effluent limitation has been required to keep the Discharger from increasing its salt loading.

Copper Limitation: The Discharger states that the limitation for copper included in the proposed Order is not justified because the facility does not add copper to the discharge. The source of the copper is from the Folsom South Canal, which the Discharger passes through its facility.

Section 1.4.4 of the SIP allows the Regional Water Board to consider Intake Water Credits on a pollutant-by-pollutant and discharge-by-discharge basis when establishing water quality-based effluent limitations. The SIP requires that the intake and discharge be to the same waterbody. The Discharger's intake water is drawn from the Folsom South Canal and the surface water discharge is to another waterbody. Therefore, water intake credits cannot be allowed. Without water intake credits, the Discharger is responsible for the pollutants in the intake water.

Mass-Based Limitations: The Discharger states that the mass-based Effluent Limitations for TSS and BOD₅ in the Domestic Effluent should be removed. Federal law requires only monthly and weekly averages and concentration-based limits for BOD and TSS.

Daily maximum effluent limitations for BOD₅ and TSS are included in the proposed Order, in addition to the average weekly and average monthly effluent limitations, to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. BOD₅ and TSS are also appropriately limited by mass in accordance with 40 CFR 122.45(f)(1), which states that, "*All pollutants limited in permits shall have limitations, standards or prohibitions expressed in terms of mass...*"

Total Coliform Limitation: The Discharger requests that the total coliform limitation be changed to 23 MPN/100ml as a 30-day median. This is consistent with the previous Order. Expressing the effluent limitation as a 7-day median is only a recommendation by the Department of Health Services and is not required.

In a letter to the Regional Water Board dated 8 April 1999, the California Department of Health Services indicated that DHS would consider wastewater discharged to water bodies with identified beneficial uses of irrigation or contact recreation and where the wastewater receives dilution

of more than 20:1 to be adequately disinfected if the effluent coliform concentration does not exceed 23 MPN/100 mL as a 7-day median and if the effluent coliform concentration does not exceed 240 MPN/100 mL more than once in any 30 day period. The proposed total coliform effluent limitations are appropriate and necessary to ensure the protection of beneficial uses of the receiving water.

Interim Copper Limitation: The Discharger requests that the interim copper limit be increased to 20.4 µg/L.

The interim limitations for copper in this Order are based on the current treatment plant performance. In developing the interim limitation, where there are 10 sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical Methods for Engineers and Scientists, Kennedy and Neville, Harper and Row*). Therefore, the interim limitations in this Order are established as the mean plus 3.3 standard deviations of the available data.

Mgmt. Review _____

Legal Review _____

15/16 March 2007
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